

Express Mail No.: EV 309292975 US

Deposit Date: 09/17/2003

APPLICATION FOR UNITED STATES LETTERS PATENT
FOR
LIQUID RACING GAME

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[0001] This application claims the benefit of U.S. Provisional Application Nos. 60/412,126 filed September 18, 2002 and 60/424,235 filed November 6, 2002.

BACKGROUND AND SUMMARY OF THE INVENTION

[0002] The present invention relates generally to a liquid racing game.

[0003] The racing game involves manipulating the position of a vessel at a source of a liquid for filling the vessel in order to attain a certain level of the liquid within a given amount of time, or to be the first among a group of players to fill the vessel with the liquid to a certain level. The object of the game is to control the movement of the vessel in order to catch a quantity of a liquid sufficient to determine a winner or the achievement of the capture of a required quantity of a liquid in the vessel. In addition, the movement of the outlet for the delivery of the source of liquid may be separately controlled, thus presenting an additional challenge to the player of the game by requiring their manipulation of their vessel's position to match their respective liquid outlet in order to receive liquid into the vessel.

[0004] The outlet for the liquid delivery is controlled to operate at variable speeds and variable directions in variable sequences. The vessel may be independently controlled in its direction and speed by a respective player. Multiple players may race against one another to determine which player is able to capture a sufficient quantity of

liquid that would activate a liquid detection device and signal a winner. Additionally, the game may be used by one player to race against a given time interval. A predetermined quantity of liquid captured by the single player may signal the award of a prize, tokens, or tickets that relate to the player's achievement level. Another variation of the present invention allows for a multiple player game wherein opposing players would independently control the positions of a liquid outlet and a vessel, respectively.

[0005] Another variation of the game involves a plurality of fixedly mounted liquid outlets. In this example, the object of the game would be for the player to fill his vessel by positioning the vessel under the appropriate one of the plurality of liquid outlets that would be delivering a quantity of a liquid at that moment. Liquid could be delivered by more than one outlet at any particular time. A processor running a computer program may control the liquid delivery through the plurality of liquid outlets. Alternatively, the delivery of the liquid could be randomly controlled by a processor or a mechanical valve. In the usual course of game play, no single delivery of liquid through an outlet would normally be sufficient to fill the vessel, thus requiring a player to move his vessel to several positions in an attempt to fill his vessel quickly within a given time frame. Alternatively, a player may be playing in order to be the first to fill his vessel when playing against other players playing their respective vessel under the plurality of liquid outlets. Another variation would include other players playing their respective vessel under each of their respective plurality of liquid outlets. Another variation of the game may include the delivery of the liquid through the plurality of liquid outlets to be controlled by a second game player.

[0006] The present invention also includes versions of the games that may be played as a video game. Such versions of the present invention may include a video game machine comprised of a monitor, a processor, and at least one player interface. This example of the present invention would use the monitor for displaying a playing field image and at least one player controllable image such as the vessel or the liquid outlet. A processor would be utilized to generate the images on the monitor and also for managing game play. The player interface is intended to be any of the typical variations of equipment used by a player for the input of player control into the game. The interface may be comprised of a button, a joystick, a ball, a steering wheel, finger-on-glass, or a touch sensitive interface. For example, the player interface could be a three dimensional replica of the player controlled image found on the video game screen, such as a pitcher, a mug, or the handle on a beer tap.

[0007] In addition to the novel features and advantages mentioned above, other objects and advantages of the present invention will be readily apparent from the following descriptions of the drawings and preferred embodiments.

BRIEF DESCRIPTION OF THE DRAWINGS

[0005] Figure 1 is a pictorial view of an example embodiment of a game of the present invention;

[0006] Figure 2 is a pictorial view of an example embodiment of a game of the present invention;

[0007] **Figure 3** is a pictorial view of an example embodiment of a game of the present invention;

[0008] **Figure 4** is a pictorial view of an example embodiment of a game of the present invention;

[0009] **Figure 5** is a pictorial view of an example embodiment of a game of the present invention; and

[0010] **Figure 6** is a pictorial view of an example embodiment of a game of the present invention.

[0011] **Figure 7** is a pictorial view of an example embodiment of a game of the present invention;

[0012] **Figure 8** is a pictorial view of an example embodiment of a game of the present invention;

[0013] **Figure 9** is a pictorial view of an example embodiment of a game of the present invention;

[0014] **Figure 10** is a pictorial view of an example embodiment of a game of the present invention;

[0015] **Figure 11** is a pictorial view of an example embodiment of a game of the present invention; and

[0016] **Figure 12** is a pictorial view of an example embodiment of a game of the present invention.

[0017] **Figure 13** is a pictorial view of an example embodiment of a game of the present invention.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENT(S)

[0017] **Figures 1** through **6** show one example embodiment of the game of the present invention. The embodiment of the present invention is a game comprised of a liquid outlet designed to look like a beer tap **20** and a pitcher **30** to catch a flow of water from the tap. A player controls the lateral motion of the pitcher by a joystick. The tap moves laterally at speeds and patterns that may be programmed on a control board. The object is to fill the pitcher with water from the moving tap. The game is a race to fill the pitcher. Coin operated versions are possible which dispense tickets or tokens to redeem for prizes. Operator versions are possible in which an operator starts the race and distributes a prize to the winner.

[0018] An example embodiment of the present invention will provide about ten player positions. The game could be an operator version. The spout and pitcher movement may be compressed air activated. The spout and pitcher may also be moved by stepper motors to allow precise programming of the movement. The spout and pitcher can operate at variable speeds and movement sequences that can be controlled.

[0019] As shown in **Figure 1**, the console **10** is shown with the liquid outlet appearing as a beer tap **20** located in a position over the top of a vessel appearing as a pitcher **30** so that water fills the pitcher. Also shown is a liquid detection device, in this embodiment a float switch **40**, that will provide a signal to the game processor when a sufficient quantity of water is contained within the pitcher **30** to reach a specific level.

[0020] **Figure 2** provides an example of a first variable positioning mount **50** that allows for the movement of the beer tap **20**. In this example, the mount **50** is supported on a set of parallel rods and moved by a chain driven mechanism. The mount **50** moves horizontally on the parallel rods, allowing the beer tap to also move in a horizontal direction. The present invention allows for the movement of a spout or other similar liquid outlet such as the beer tap **20** to move in variable directions and at variable speeds. The processor of the present invention may control such movement. The movement may be programmed or randomly applied to the mount **50**. A simple mechanically actuated means, such as cam or gears either independently operating or in a combination thereof, may also be used to move the mount **50** to different positions and at different speeds.

[0021] **Figure 2** also shows an example of the second variable positioning mount **60** that allows for the movement of the pitcher **30**. In this embodiment of the present invention, the mount **60** is supported by a set of parallel rods and moved by a chain driven mechanism. Lateral movement is allowed by the mechanism in this present example. In this example, the movement of the mount **60** and thusly the pitcher **30** are controlled by the player of the game as the player attempts to catch water coming from the moving beer tap **20**. The present invention may allow the player to control the vessel, such as the pitcher **30** shown, in any direction.

[0022] **Figure 3** shows an example of the pitcher **30**. The float switch **40** is shown mounted inside the pitcher **30**. The float switch **40** can generate a signal to send to the game processor as an indicator of a player winning the game upon

capturing a sufficient quantity of water to reach a specific level in the pitcher **30**. In addition, a valve **32** is shown in the bottom of the pitcher **30**. The valve **32** is positioned to allow the water to drain from the pitcher **30** at the conclusion of a game in order to reset the present invention for the playing of a subsequent session of the game. The valve **32** may be either operator controlled or controlled by the game processor. **Figure 3** also shows another view of the second variable positioning mount **60** as described for **Figure 2**.

[0023] **Figure 4** is a view of an example console **10** of the present invention. It should be noted that a console may contain a single game unit to accommodate one player at a time or the console may contain a plurality of game units to allow simultaneous playing between multiple players. In addition, a single game unit may also contain a timer so as to allow multiple players to compete against one another. **Figure 4** shows the beer tap **20**, pitcher **30** and a portion of the second variable positioning mount **60**. In addition, a joystick **70** is shown as an example of a player interface of the present invention wherein the player controls the position of the pitcher **30** during the game play.

[0024] **Figure 5** is another view illustrating the beer tap **20**, the pitcher **30**, and the float valve **40** of this example embodiment of the present invention.

[0025] **Figure 6** is a view of the back of an example embodiment of the present invention. Note that pumps, piping and a filter housing are shown as a portion of the plumbing to deliver a source of liquid **80** for the handling of water in this example of the present invention. This view of an example embodiment of the present invention also

shows an example processor **90** that is in communication with the liquid detection device, such as the float valve **40** shown earlier.

[0026] **Figure 7** shows another example embodiment of the present invention. In this example, a first player interface, such as the joystick **71**, is used to control the position of a liquid outlet, shown as a beer tap at **20**. A second player interface, shown as the joystick at **72**, is used to control the position of the vessel, shown as a pitcher **30**. In this example embodiment, one player controlling the movement of the tap **20** may attempt to prevent a second player from filling the pitcher **30** under his control.

[0027] **Figures 8** through **13** show an example embodiment of a game of the present invention. As shown in **Figures 8** and **9**, this embodiment of the present invention is a game comprised of a plurality **21** of liquid outlets designed to look like a beer tap **20** and a vessel designed to look like a pitcher **30** to catch a flow of water from the taps **20**. A player controls the lateral motion of the pitcher **30** by a player interface such as the joystick **70**. The taps **20** intermittently release liquid at rates and patterns that may be programmed on a control board. The object is to fill the pitcher **30** with water from taps **20**. Also shown in this example embodiment are the liquid detection device, in this example a float valve **40**, and a portion of a variable positioning mount **60** that allows for the movement of the pitcher **30**. The game is a race to fill the pitcher. Coin operated versions are possible which dispense tickets or tokens to redeem for prizes. Operator versions are possible in which an operator starts the race and distributes a prize to the winner.

[0028] An example embodiment of the present invention will provide about ten player positions. The game could be an operator version. The spout and pitcher movement may be compressed air activated. The pitcher may also be moved by stepper motors to allow precise programming of the movement. The pitcher can operate at variable speeds and movement sequences that can be controlled.

[0029] As shown in **Figures 10 and 11**, an interior view of an example embodiment of the present invention shows a portion of the variable positioning mount **60** that allows for the movement of the pitcher **30** (not shown). A source of delivery of a liquid **80** is shown plumbed to a manifold **22** that is connected to the respective valves **23** allowing for the delivery of liquid through the plurality **21** of taps **20** shown in **Figures 8 and 9**. Also shown is a processor **90** in communication with the liquid detection device of the present invention to determine the performance of a game player, typically to determine when the vessel **30** is filled with a liquid.

[0030] **Figure 12** is another view showing a portion of the mount **60**. **Figure 13** shows some of the plumbing associated with the movement of the source of a liquid **80** for delivery through a liquid outlet to a vessel of the present invention.

[0031] The preferred embodiments herein disclosed are not intended to be exhaustive or to unnecessarily limit the scope of the invention. The preferred embodiments were chosen and described in order to explain the principles of the present invention so that others skilled in the art may practice the invention. Having shown and described preferred embodiments of the present invention, those skilled in the art will realize that many variations and modifications may be made to affect the

described invention. Many of those variations and modifications will provide the same result and fall within the spirit of the claimed invention. It is the intention, therefore, to limit the invention only as indicated by the scope of the claims.